# HP StoreEasy 5000 Storage Quick Start Guide

## Abstract

ⓘ **IMPORTANT:**   Read this document first.

The HP StoreEasy 5000 Storage is the general name for several 5xx0 hardware-software solutions. The Microsoft Windows Storage Server 2012 Standard Edition operating system is preinstalled and activated on all systems. The instructions in this guide apply to all HP StoreEasy 5000 Storage models unless otherwise noted.

Each storage system features HP server blades and dense disk storage combined in a single 3U chassis (Figure 1 (page 1)).
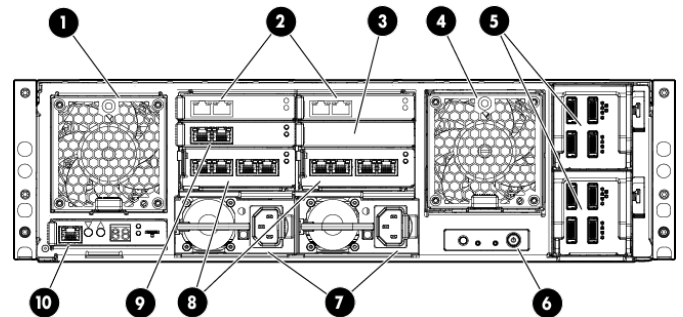
**Figure 1 HP StoreEasy 5000 Storage front view**
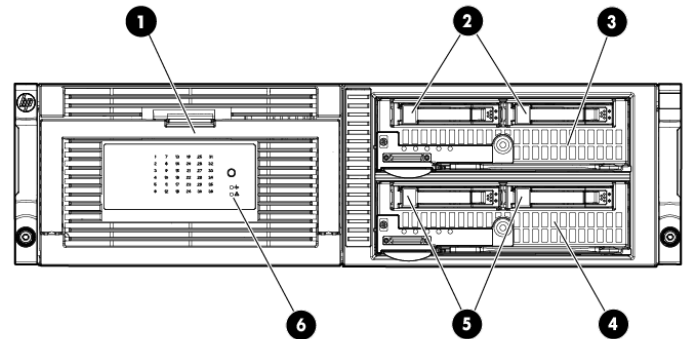


| | |
|---|---|
| 1. Disk drive | 2. Server blade 1, OS drives |
| 3. Server blade 1, Bay 1 | 4. Server blade 2, Bay 2 |
| 5. Server blade 2, OS drives | 6. Chassis fault LED |

Figure 2 (page 1) shows components referenced elsewhere in this guide.

**Figure 2 HP StoreEasy 5000 Storage rear view**



| | |
|---|---|
| 1. System fans (redundant) | 2. HP 2-port 10 Gb I/O module (2); these modules connect to the integrated NIC located on each server blade motherboard. |
| 3. Intraconnect (internal switch connecting EMU) | 4. Drive fans (redundant) |
| 5. SAS I/O module (2) | 6. Power button |

7. Power supply (2)

8. HP 4–port, 1 Gb Ethernet PCI-e module

9. HP 2-port, 1 Gb Ethernet I/O module (connects to the mezzanine NIC in each server blade)

10. Management port for iLO (servers 1 and 2), and Enclosure Manager Unit (EMU)

> (!) **IMPORTANT:** A System Recovery DVD is included with your storage system. This DVD is used to restore the storage system to factory defaults and should be kept in a safe place.

## Record network information

It is critical to have the correct networking information available before proceeding with the system installation and configuration. It may be necessary to pre-stage DNS information. Contact your system administrator to clarify network configuration requirements.

> (!) **IMPORTANT:** Before joining the StoreEasy system nodes to the Active Directory domain, ensure that there is network connectivity between each node and the domain controller.

The StoreEasy 5000 requires a minimum of 7 IP addresses. These addresses may be statically assigned or assigned by a DHCP server or both. If you are using static addressing or a DHCP server that does not automatically update DNS, ensure that both forward and reverse DNS information (A and PTR records) is pre-staged in the DNS server.

Use Table 1 (page 2) to document your network information before proceeding with system setup.

**Table 1 Network information**

| Network device | Fully qualified DNS name (FQDN) | IP address |
|---|---|---|
| Enclosure Manager | | |
| Node 1 iLO | | |
| Node 2 iLO | | |
| Node 1 | | |
| Node 2 | | |
| Cluster | | |
| First file server | | |

## Restrictive Active Directory environments

If the StoreEasy system is placed in a restrictive Active Directory environment, it may require pre-staging

Active Directory objects or certain administrative permissions. See the following Microsoft articles for more information:

- How to Create a Cluster in a Restrictive Active Directory environment
- Failover Cluster Step-by-Step Guide: Configuring Accounts in Active Directory

## Validate network information

Confirm that the IP address and names are not already in use.

Complete the tests in Table 2 (page 2) to verify network connectivity. Consult with your network administrator to confirm test results.

**Table 2 Validation tests**

| Test | Command(s) to execute | Successful? (Y/N) |
|---|---|---|
| Ping the IP address of Node 2 from Node 1. | `ping <node 2 address>` | |
| Ping the name of Node 2 from Node 1. | `ping <node 2 name>`<br>`ping <node 2 fqdn>` | |
| Ping the IP address of Node 1 from Node 2. | `ping <node 1>` | |
| Ping the name of Node 1 from Node 2. | `ping <node1 name>`<br>`ping <node1 fqdn>` | |
| Verify forward and reverse DNS information for Node 1 is correct. | `nslookup <node 1 address>`<br>`nslookup <node 1 name>`<br>`nslookup <node 1 fqdn>` | |
| Verify forward and reverse DNS information for Node 2 is correct. | `nslookup <node 2 address>`<br>`nslookup <node 2 name>`<br>`nslookup <node 2 fqdn>` | |
| Ping the domain controller from Node 1. | `ping <domain controller address>`<br>`ping <domain controller name>`<br>`ping <domain controller fqdn>` | |

**Table 2 Validation tests** *(continued)*

| Test | Command(s) to execute | Successful? (Y/N) |
|------|----------------------|-------------------|
| Ping the domain controller from Node 2. | `ping <domain controller address>`<br><br>`ping <domain controller name>`<br><br>`ping <domain controller fqdn>` | |
| Verify the network path to the domain controller and DNS servers is correct. | `pingpath <domain controller address>`<br><br>`pingpath <domain controller name>`<br><br>`pingpath <DNS server address>` (repeat for each DNS server)<br><br>`pingpath <DNS server name>` (repeat for each DNS server) | |

Additionally, verify that the DNS information is valid for the cluster and file server. HP recommends that you also verify the iLO and Enclosure Manager IP address/name resolution; however, this is not critical to support the cluster and file server.

## Rack the storage system hardware

⚠ **WARNING!** The storage system is heavy. Always use at least two people to move the storage system into the rack.

1. If you ordered the storage system without the rack, install the rail kit and storage system chassis by following the *HP 3U Storage System Rail Kit Installation Instructions*, packaged with the rail kit.
2. Optionally, install any disk enclosures.
   a. Add disk enclosures to the rack by following the *HP 2U Storage System Rail Kit Installation Instructions*, packaged with the rail kit.
   b. Cable the disk enclosures to the storage system chassis. For supported cabling, see the *HP StoreEasy 5000 Storage Administrator Guide*.

   ⓘ **IMPORTANT:** Ensure that cabling in the back of the rack does not interfere with system operation or maintenance. Bind cables loosely with cable ties and route excess cable out of the way, along the side of the rack.

3. Ensure that the disk drives are fully seated in the disk drive drawer and disk enclosures.

   To verify the lever is fully latched, pull on the lever but do not press the release button. If any lever appears to be loose, press the lever until it clicks.
4. Connect the storage system power cords to the rack power supply using standard procedures.

## Connect the storage system network cables

The EMU provides connections to two types of management processors:

- EMU processor
- iLO processor for each server blade

To simplify initial setup, the EMU and iLO processors are configured for static addressing as follows:

- EMU: 10.0.0.10
- Server 1 iLO: 10.0.0.11
- Server 2 iLO: 10.0.0.12
- Subnet: 255.255.255.0

Figure 3 (page 3) identifies the network ports on the rear of the storage system.

**Figure 3 Storage system network ports**
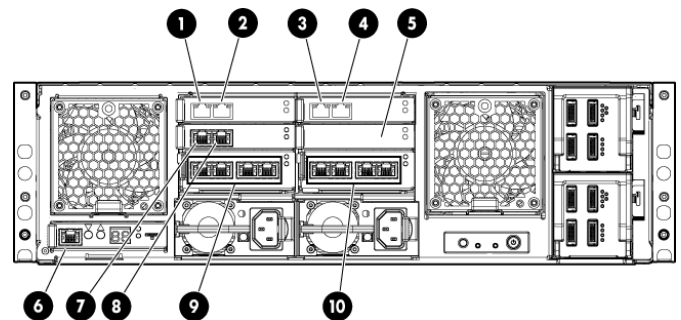


1. Server 1, 10 GbE port 1    2. Server 2, 10 GbE port 1

3. Server 1, 10 GbE port 2    4. Server 2, 10 GbE port 2

5. Intraconnect (internal switch connecting EMU)    6. Enclosure Manager NIC (includes iLO connections for both servers)

7. Server 1, Mezz NIC, port 1    8. Server 2, Mezz NIC, port 1

9. Server 1, PCI-e NIC, ports 1-4    10. Server 2, PCI-e NIC, ports 1-4

## Power on the storage system

1. Power on the disk enclosures, if any.

2. Power on the storage system by pushing the power button (6, Figure 3 (page 3)) on the back of the chassis.

> **NOTE:** Approximately 30 seconds after the storage system is powered on, the server blades should start to power on automatically. During this time, the Enclosure Manager (EM) fault LED flashes amber. After the EM has powered on, the EM fault LED turns off and the EM health LED turns solid green. Then, the server blades start to power on.
>
> Once the storage system power is on, power on the server blades if they do not automatically power on.

> **NOTE:** The amber chassis fault LED (6, Figure 1 (page 1)) flashes if any component fault is detected by the System Management Homepage. A fault can be as minor as a cable unplugged from a NIC port, and therefore may not be cause for concern.

## Configure iLO and EMU network ports

1. Connect a system (the **configuration system**) in the environment or a laptop to the EMU port (10, Figure 2 (page 1)).

   Use an Ethernet cable connected directly to the system or through a switch.

2. Configure the NIC on your system to a static address of 10.0.0.20 with the subnet mask 255.255.255.0.

3. Configure iLO on blade 1. Open a web browser and log in to iLO using the address `http://10.0.0.11`. You are prompted to enter the user name and password. The password for the iLO Administrator is located on a pull-out tab on the front of the server blade. After logging in, HP recommends that you change the Administrator password. To do so, select **Administration→User Administration** in the iLO management interface.

4. Configure the network as required for your environment. Select **Administration→Network** in the iLO management interface. You can either enable DHCP or edit the IP address details and enter site-specific network settings.

   When you configure the iLO IP addressing to use DHCP, ensure that you select the appropriate

DHCP addressing options for IPV4. Available options are:

- Use DHCPV4 Supplied Gateway
- Use DHCPv4 Supplied Static Routes
- Use DHCPv4 Supplied Domain name
- Use DHCPv4 DNS Servers
- Use DHCPv4 Supplied WINS Servers

5. Click **Apply** to save your settings.

6. Configure iLO on blade 2. Open a web browser and log in to iLO using `http://10.0.0.12`. Repeat steps 4 and 5.

7. Connect to the Enclosure Manager software using a secure shell application (PuTTY, for example). Log in to the EMU with the EMU IP address (10.0.0.10), port (22) and connection type (SSH). When prompted, enter the EMU Administrator password on the tear-away label attached to the top left rear of the enclosure. Configure the following:

   a. Change your EMU Administrator password by typing `set password` at the command line prompt (optional).

   b. To change the static IP address, type the command `set ipconfig static` at the command line prompt and follow the instructions.

   c. To change the EMU addressing to DHCP, type `set ipconfig dhcp` at the command line prompt. If you have a DHCP server in your network, you can choose to assign the IP address automatically by the DHCP server.

> **NOTE:** You cannot connect to iLO or the EMU from the **configuration system** until you change the network settings on the configuration system.

HP recommends that you configure the EMU so that administrators have remote network access to the unit. See the *HP StoreEasy 5000 Storage Administrator Guide* for network options.

## Access the storage system

Configuration of the storage system, including the cluster setup, is designed to be performed from a single blade server. Connect to either one of the servers using the remote console (iLO) or a local I/O diagnostic (SUV) cable. The iLO remote console is the recommended method. If you are using iLO, you must have the EMU/iLO port (10, Figure 2 (page 1))

connected to your network, and iLO addresses configured appropriately.

> **NOTE:** HP BladeSystem c-Class KVM Interface Adapters are not supported.

The server from which you choose to perform the configuration will be designated the *first node*. The other server will be designated the *second node*.

For instructions on using each access method, see the *HP StoreEasy 5000 Storage Administrator Guide* or the *HP Integrated Lights-Out User Guide*.

## Set up Windows and discover second node

When the storage system starts, the servers will begin a first time setup procedure that takes approximately 10–15 minutes, including the Set Up Windows wizard. Use only one server node (blade) to complete the setup procedure.

> **NOTE:** Your storage system comes pre-installed with the Microsoft Windows Storage Server 2012 Standard Edition operating system. No operating system installation is required.

In the Set Up Windows wizard, you are asked to choose a language, country, and keyboard. After you accept the EULA, the server you are connected to attempts to discover the second server. This is done over the internal switch (3, Figure 2 (page 1)). If the second server is not ready, you may see a message stating `Cannot establish communication with the second node`. Click **Retry** to attempt discovery, and repeat the retry until the second node is discovered.

After the second node is discovered, there will be a few more installation steps that occur automatically on each server, and then both servers will reboot.

> **NOTE:** If you click **Cancel** instead of Retry, you must access the second node from iLO or a local I/O diagnostic (SUV) cable and manually follow the Set Up Windows wizard on the second node. Because the discovery process was not completed, there will also be an extra step later to establish a connection between the two nodes. You will find instructions for this, if needed, in the online help of the Initial Configuration Tasks (ICT).

## Completing initial configuration

After the servers reboot, continue the configuration using the first node. A default Windows Administrator password (`HPinvent!`) has been set and this is used to log on automatically. Leave this Windows Administrator password unchanged until you are prompted for a new password in a later configuration step. On logon, the HP ICT window is launched automatically.

Use the HP ICT to perform setup tasks such as setting the time zone, network configuration, changing the computer name, joining a domain, and creating the cluster. To create a cluster, each server will need network connectivity to the domain controller and a DNS server.

> **IMPORTANT:** HP strongly recommends that you validate your configuration when using clusters. Whether you create a cluster through the ICT or the Failover Cluster Manager, one of the first steps is validating your configuration using the Microsoft cluster validation tool. If you choose to skip the validation step, you can still validate the cluster after it is created.

After the storage system installation process is complete, you can use the browser (iLO) and remote desktop methods to access and configure the storage system. See the *HP StoreEasy 5000 Storage Administrator Guide* for more information about using these access methods.

> **IMPORTANT:** Be sure to install any available software updates. You can be notified of updates by subscribing to the HP Driver, Support, and Security alerts e-mail list:
> 1. Go to http://www.hp.com/go/ StoreEasy5000.
> 2. Select **Technical Support/Manuals**.
> 3. On the product page that appears, select **Signup: driver and support alerts**.
>
> To manually check for updates, perform steps 1 and 2. On the product page that appears, select **Download drivers and software**. Select your StoreEasy 5000 product and then select the operating system. A list of available downloads is displayed.

HP strongly recommends that you also install Insight Remote Support as described in the *HP StoreEasy 5000 Storage Administrator Guide*.

## Supporting documentation

- *HP StoreEasy 5000 Storage Administrator Guide*

- *HP StoreEasy 5000 Storage Release Notes*

- *HP 3U Storage System Rail Kit Installation Instructions* (to install rails and rack the storage system chassis)

- *HP 2U Storage System Rail Kit Installation Instructions* (to install rails and rack disk enclosures)

You can find these documents from the following website:

http://www.hp.com/support/manuals

Select **NAS Systems** in the storage group and then select **HP StoreEasy 5000 Storage**. Localized versions of this quick start guide are also located on the Manuals page.

For iLO documentation, go to www.hp.com/go/iLO and select **HP iLO 3 Documentation**.

## Regulatory information

For important safety, environmental, and regulatory information, see *Safety and Compliance Information for Server, Storage, Power, Networking, and Rack Products*, available at http://www.hp.com/support/Safety-Compliance-EnterpriseProducts.

## Documentation feedback

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